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ABSTRACT

This booklet presents two papers on educational quality and reform. "Pedagogical Practice and the Philosophy of Education: The Experience of Ukrainian In-Service Teacher Education," explains that most Ukrainian inservice teacher education is provided through regional institutes. It focuses on the Poltava Ostrogradsky Teachers' Recertification Institute, discussing the kinds of teachers who come to the institute for training (anti-theoretical and anti-innovative), looking at the theory-practice relationship, and examining philosophy of education courses in Ukrainian inservice training. The second paper, "Knowledge Management: Enriching of Intellectual Capital and Transition to Knowledge Society," explains that the shift from an industrial to a knowledge society changes the nature of the relationship between society, knowledge, and technology. To be successful in the modern world, it is necessary to be capable of producing metaproduct and meta-technologies. The Ukraine must answer the meta-challenge of how to transfer knowledge to effectually utilize intellectual capital. Ten appendixes discuss: integrative education and polymorphism of knowledge; list of recent publications by the author; Poltava Ostrogradsky Regional In-service Teachers Training Institute; Ostrogradsky (famous educator and mathematician, 1801-61); Inset-Poltava takes part in NASA education program, Moonlink; the development of economic school education in the Poltava region; and postmethods. (Contains about 25 endnotes.) (SM)

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TO THE BEST SOLUTION IN EDUCATION

Serhiy Klepko

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"Teacher education still has the honor of being simultaneously the worst problem and the best solution in education"
M.Fullan

Foreword

The idea of this book appeared in connexion with the invitation of the Government of the United States of America to participate in a professional exchange project entitled "Education Reform at the Secondary Level," which will take place from July 6 through July 28, 2002. This project has been developed under the framework of the International Visitor Program.

The program consists of meetings, appointments and discussions that will address issues concerned with the U.S. education system and its administration and reform.

Foreseeing enriching my experience while learning the USA education system I would like to fix my starting point of learning the forces of education and changes reform. I have chosen out my two papers which were published in English and which illustrate best of all my striving for THE BEST SOLUTION IN EDUCATION.

The article "PEDAGOGICAL PRACTICE AND THE PHILOSOPHY OF EDUCATION: THE EXPERIENCE OF UKRAINIAN IN-SERVICE TEACHER EDUCATION"[1] tells about my vision of the teachers training. The article "KNOWLEDGE MANAGEMENT: ENRICHING OF INTELLECTUAL CAPITAL AND TRANSITION TO KNOWLEDGE SOCIETY"[2] reflects the atmosphere in which Ukrainian teachers try to find THE BEST SOLUTION IN EDUCATION.

Perhaps these works will help to carry on a dialogue with American colleagues. I am thankful for the help in preparing this book to: translators V.Tsekhanovska, L.Ischenko, M.Hryhoriev; coordinating editor O. Stotska; cover design S. Babenko. Special thanks to the volunteer of Peace Corps USA A.Ellerman for proof reading.

S.Klepko

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[1] *Klepko S.F. (2001). Pedagogical Practice and Philosophy of Education: The Experience of Ukrainian In-Service Teacher Education. // The first virtual conference for teacher educators Opening Gates in Teacher Education, February 12-14, 2001. (http://vcisrael.macam.ac.il).*

[2] *Klepko S. (2000). Knowledge Management: Enrichment Of Intellectual Capital And Transition To Knowledge Society // Report On Management. Knowledge Management. Ed. Gr. Gierszewska. – Warszawa, 2001. – P.63-77.*

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PEDAGOGICAL PRACTICE AND THE PHILOSOPHY OF EDUCATION: THE EXPERIENCE OF UKRAINIAN IN-SERVICE TEACHER EDUCATION

1. In-Service Education in Ukraine

Modern education in Ukraine deviates from the rudiments of the soviet education system with difficulty. After the fall of the administrative-command economy in Ukraine a break between factual labour-market demands and knowledge and people skills appeared. The "Old" knowledge and abilities obtained by them formerly were suitable only for a militarized FSU economy. They almost instantaneously depreciated. The country ought to teach not only the young people, but also the adults, including teachers[1].

How quickly can an education orientation be changed in society? How much will such change cost the state, society, person? It seems that the system of educational sciences still has not found answers to these questions.

That's why the problems of education system improvement strategies development in Ukraine have gained much more importance. "*Lack of strategic approach to reforming of education is a threat for the future of Ukraine*... But today just the strategic vision of perspectives of education development under the new conditions is absent. The organs of state education management do not sufficiently take into account the public changes. In their efforts they chiefly orient on safety of high indexes of soviet education system, and this is the main problem of modern education system. There is no active educational policy directed on world market and strategies of education system integration in the world society"[2].

The Reforms in education are doomed to failure, when they are not followed by suitable uninterrupted improvement or upgrading teachers' qualifications. Like the majority of Eastern Europe an countries, Ukraine is trying to transform the style and content of teacher training problem. And though Ukraine can not take proud in (as it is in some countries of Central and Eastern Europe) expending 25-30 % of all budgetary resources that are spent on the education system on teachers professional development[3], that is accordingly Ukrainian legislation. Every working teacher has a possibility once every five years to attend the 144 study hours (during a month), or, as minimum, 72 hours (during two weeks) courses of teachers' qualification improvement. In-Service teachers training in Ukraine is mainly provided through regional institutes of In-service teachers training Departments of *management*, to which the methodological services are subordinated in every administrative unit (town, region), and at least traditionally in *pedagogic universities and institutes*.

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2. Poltava Ostrogradsky Teachers' Recertification Institute

In particular the In-Service education of about 30.000 thousand teachers of Poltava region is provided by Poltava Ostrogradsky Teachers' Recertification Institute. More than 23 thousand of them work at secondary schools, about 6 thousand work in preschool establishments, less then 1 thousand work in out-of-school teaching and educational establishments. Since the institute's foundation in 1940 almost 154 thousand teachers have attended postgraduate courses. Today the Institute increases professional skills in 24 specialties, in which the teachers received diplomas in pedagogic higher education establishments.

For guaranteeing this learning process with such a contingent (annually the courses pass from 3 to 5 thousand teachers) there are 3 chairs in the institute: Pedagogic Technologies, the Humanities, and Management of Education, and 5 methodological departments: Pedagogic Technologies, the Humanities, National Upbringing, Mathematics & Natural Sciences, editorial-publishing; and the office of New Information Technologies. The Center of the Integration of school education of Ukrainian APS and 28 special investigative groups work in the Institute and attend to experimental work in education according to regional needs.

3. Ukrainian Teacher: Anti-theoretical and Anti-innovative

What kind of teacher comes to the institute for training?

The quality of education in the society first of all is determined by professional quality of educators. M. Young in utopia "The Rise of the Meritocracy 1870 - 2033" aphoristically warned, where " teachers are of the second-quality there is the second-quality elite: Meritocracy can never be better of its teachers". Answering the question, it's necessary to say with regret, that Ukraine has "the second-quality teacher", anti-theoretic, anti-innovative but, nevertheless, often he/she is a trustful friend of his/her pupils. Ukraine, aming to come into the way of innovative development and the creation of an effective social "city state" in the form of the society of knowledge, or a society that learns and even under unsatisfactory economic conditions tries to think about the level and intellectual capital of Ukrainian teachers in an almost invariable extent in comparison to the 90-ies. This is the explanation of an In-service education system saving in the scales, commensurable with its scales before the beginning of the transformation processes. But it's necessary to mark that pre-transformation scale of in-service education were quite insignificant. Nowadays it is surely under a difficult reformation in spite of the low economic status of the Ukrainian teacher who at the end of the II-nd millennium has lost the opportunity even to subscribe to pedagogic periodicals. They began the constructive conversation (dialogue) about teacher accordance to challenges of the XXI-st century, in particular, teachers in every Ukrainian school were given the task to know the modern information technologies perfectlu and to know at least one foreign language well.

But the determinative condition of the development of education should create a state of philosophical & educational teacher-practician consciousness, that provides

the reflectiveness of pedagogical activity. Thus, the philosophical-educational consciousness of the Ukrainian educator gradually absolves from the bonds of communist ideology, but until now it has been infected with an "izms" virus, that is the aspiration to identification with traditional philosophical positions (idealism, realism, pragmatism, existentialism) and the belief in the existence of true "izms". In addition the consumer attitude to the Philosophy of Education is observed: "*give us the right of the Philosophy of Education, then we will turn the world and reform the education*".

But the present type of school administrator has negative attitudes to theoretical knowledge, preferring the settlement of the problems of practice by the medium of financial mechanisms and studying of laws or normative acts, which have deal with education, because such administrators have the majority of problems with the paper work. According to our research results, in spite of allegedly sufficient effectiveness of their work (more than 50% of the pupils in their schools have higher than "satisfactory" results, there are not delinquencies, 80-90% of graduating students enter Higher Educational Establishments etc.), such administrator thinks, that the basic problems in his/her work are economic ones (heating of school buildings in winter, organization of pupils meals). Such a school master seldom cares about educators' professional improvement, fights against tearing teachers away from work for participation in different methodological unions, seminars etc. (maybe it is right S.K.), and tries to acquit his/her school teachers from participation in methodological actions. Having been satisfied with the effectiveness of his/her work, which does not bring on criticism from the authorities, such a school master does not feel the need for integrative and planning-designing thinking. Declared by the state the national upbringing he/she considers as his/her own *project,* so as the healthy mode of life too. Such a schoolmaster also demonstrates a lack of technological thinking: the task to count the complex of technologies, on the base of those his/her school works brings on embarrassment. Instead of these he/she pays much attention to diagnosing and inside-of-school control, and demands maximum concreteness from pedagogic editions. But he/she can not determine the unbanal elements of his own experience, feels him/herself a stranger concerning a contemporary "technological", "planning-designing", information society, the belief that the Philosophy of Education is not a collection of good ideas, but first of all it is a discourse about education, philosophical analysis of pedagogic practice, but not a set of recipes excepts with difficulty.

It is difficult to discribe the value and consciousness orientation of Ukrainian teachers and because of the lack of answers in the research, but it is possible to get the first idea from teachers' answers on the question: "What books must pupils of secondary school read first of all?".

V.J.Bennet put the same question in the USA in questioning of 500 teachers, overwhelmingly, of the humanitarian disciplines. There is the essential consent concerning 10 classic works in answers of American teachers, among those are 4 works in ancient literature, 6 works of Modern time, and only 1 work was written in

the XX-th century[4]. In analogic questioning, carried out by us among 500 Ukrainian teachers (half of them were the teachers of the humanitarian disciplines, another half were the teachers of mathematics and natural sciences disciplines), the essential consent concerning to 10 classic works also appeared: these are 5 works in Ukrainian literature, 2 works in Russian literature, and 3 works are in foreign literature. There are no works from ancient literature.

The comparison of "major" books for American and Ukrainian pupils is quite interesting and fixes coinciding of works subjects:

Table 1. 10 major books for an American pupil and for a Ukrainian pupil

10 major books	
for an American pupil	*for a Ukrainian pupil*
1. W.Shakespeare	1.T.Shevchenko
2. Selected documents in American history	2. L.Tolstoi "War and Peace"
3. M.Twain "The Adventures of Huckleberry Finn"	3. Ukrainian folk fairy tales
4. Bible	4. Bible
5. Homer "Illiad", "Odyssey"	5. L. Ukrainka "The Forest Song"
6. Ch. Dickens "Great Expectations"	6. A.Pushkin "Eugene Onegin"
7. Plato "Republic"	7. O.Honchar "The Cathedral"
8. J. Steinbeck " The Grapes of Wrath"	8. M.Hrushevskyi "The History of Ukraine"
9. H.Gorton «The Capital Letter»	9. World folk fairy tales
10. Sophocles «Oedipus Rex»	10. A.Dumas "The Three Musketeers"

We see, that in both lists there is no scientific, in particular, mathematical and natural science literature, technical and technological literature. The results of this questionnaire represent the fact that the consciousness of Ukrainian teachers is far from ancient culture, characterized by local isolation (clannishness) of outlook. Certainly it is unnecessary to absolutize these data, but subject-matter of major books selected by teachers for pupils characterizes teachers themselves.

Summarizing the various empiric notions, we discover, that a great number of Ukrainian teachers:

1) are under the mediocrity patterns pressure;

2) think, that aspiration of their further development as personalities and specialists is not necessary for them;

3) assert, that peoples, who aspire to success, get it by way of estranging from other spheres of life;

4) ignore a creative role of repetition for years everyday actions, aims, intellectual exercises;

5) neglect or perceive with difficulty the estimation of their weaknesses;

6) are not capable to provide for embarrassments, associated with delays of own development;

7) think they have reached their own "biographic competence", that is, the skills of systematic creation of their own life and development by themselves.

It is difficult for teachers to answer the XXI-st century challenges under such "biographic competence". Such a situation demands a higher level of In-service teachers' training system development, demands an concentration of attention on the problems of modern teachers at a mature age, a self-creation in dependence on their biography, and finally the settlement of the problem of practice and theory correlation.

4. The Practice-Theory Correlation

The role of the theory is to explain, to give the meaning what "occurred" and what "occurs" and foresee what will never be. Theory mission is to answer on the most various "why and what". Any theory, in spite of its perfection is abstract. It is almost impossible to apply it immediately because of practice concreteness. The value of the theory is determined by the level of its "limpidity", logically, undiscrepant, perfect, and at the same time, laconic. Technology (methodology) is the connective link between the theory and practice, which always is counted on concrete conditions. The value of technology is in quite different indexes: here in the first place is guaranty of definite practical result ahead of time under condition of exact execution of all technology demands.

The worthwhile theory answers all kinds of "why and what", which are in its competence. And the worthwhile technology gives the foreseen practical result. In spite of all this, the technology may not answer various kinds of "Why and What" and it is not necessary to expect it, as it is impossible to demand technological effectiveness out of any theory.

There is a quite strong, dynamic connection between technology & practice . Here there is no "gap". But it exists between technology and theory, because of teachers-theorists have no time to bring their conceptions to technologies level, which should be accessible to a broad practice. They justly think, that this is not their business, but at the same time the new technologies, worked out by innovators from the number of teachers-practicians, for a long time wait for theoretical basis.

Theory without technological supplementing is useless for practicians, and technology without theoretical basis is blind, it is difficult to develop it and to put it into the new spheres of practice. Thus, the integrity of pedagogic process is in a theorists and "technologist's" cooperated activity.

What does the Teachers Attitude to Theory and Technology Display?

They regard with respect the first one, but do not have actual need of it. But the concrete technologies(methodologies) they perceive with sincere interest. Teachers can be reproached, that their level of theory mastery is not sufficient. But it is necessary to understand and to try to explain: a teacher does not need a "dry theory", but rather one implemented in concrete methods "ready technology". Only in that

case, when a teacher receives them, then his/her theoretical level will be risen, his/her creative abilities will be developed.

Pedagogic technology can be considered as one of the types of producing practice, that influences invention, usage and development of other technologies directly. In the prime meaning the the term "pedagogic technology " was identical to term "technical teaching tools", although the literal meaning of "technology" is systematic art study, trade. Today pedagogic technology is considered in a wider sense: "the complex, integrative process, that includes people, ideas, tools and activity organization methods for problems analysis and planning, carrying out, evaluation and management of solving problems, which include all aspects of getting knowledge". (Determination of USA Pedagogic Communications and Technologies Association, 1979). But because of long-term domination of the ideas about subjectless upbringing of feels and thoughts, the comprehension of the essence pedagogic&technological phenomenon as the basic unit of the space of education and as the element of pedagogic activity put into practice with difficulty. That's why in order to develop "technological" teachers' mentality the structure of In-service education course is composed of a triad of learning modules:

Philosophy of Education ⇔ Pedagogic Technologies ⇔ Didactics .

Such a teaching structure is stipulated by fact, that supports descriptive and dogmatic pedagogic theory without the continual renewal of teaching tools of educational practice and does not work out the economic and organizational problems of schooling. Traditional pedagogic science, that is taught in higher educational pedagogical establishments for students, for future teachers, is not ready for the renewal of pedagogic process on the basis of pedagogic technology methods as tool of gradual and steadfast development of pedagogic science and school practice.

But in Ukraine the technological education basis is not defined, the list of different education establishments is not described technologically. Also the methodological scientific approaches to translation of the history of culture, science, engineering and art into contents of education are not developed. And if there are no such approaches, then under such circumstances it is impossibe to estimate the innovations and innovative search. It demands of reconsideration of the theory-technology correlation in pedagogic practice on the base of the Philosophy of Education.

5. Variable Dimension of the Philosophy of Education in Ukraine

Carrying out the Philosophy of Education in the contents of In-Service teachers training system is intended to change the orientation of teacher consciousness, to renew its deep structures, to make it nonconservative, open to innovations in the direction from the model "man as functional component(screw)" to "man as professional", who under any circumstances is capable of acting quickly and inventively. What does the professional philosophy as the base for pedagogic practice propose in this situation to us?

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About necessity of its development in Ukraine they began to speak only at the beginning of the 90-ies. Since that time a few All-Ukrainian conferences on the problems of the Philosophy of Education[5] took place, the earliest books and publications[6] were published, a rubric " the Philosophy of Education " in Ukrainian pedagogic journals ("Education and Management", "Pedagogics and Psychology", "Pedagogics of Tolerance", "Pedagogic Search", "September", "Postmethods" and others) became widespread (fashionable).

Working out the philosophical and educational problems, the generalized studying as the special science of the Humanities is carried out in Ukraine in different ways: science of science, planning-designing, acting, sociosystemic but for pedagogic practice such dominated measures of the Philosophy of Education are proposed first of all:

1. The Philosophy of Education as a sphere of philosophical knowledge, that uses the all-philosophical approaches and ideas for role and basic education phenomena analysis.
2. Philosophical analysis of education as society reproduction matrices: its, social structure, sociality, systems of social interaction, socially heritable conduct codes etc.
3. Positivistic understanding of the Philosophy of Education as the applied knowledge, as the reflective field of theoretical pedagogics, as the metatheory in the structure of pedagogic knowledge, its critical-methodological level.

Such variability of the Philosophy of Education dimensions, that affirms K.Popper's thesis about conventional character of philosophy determination, is often understood as the unconcreteness of the philosophical knowledge and its remoteness from interests of practice. But a change of the Ukrainian teacher's consciousness demands not only common vitally-practical measuring of the Philosophy of Education, but also for all other measures in order to form an adequate thinking criticism concerning the pedagogic practice.

The course of the Philosophy of Education is oriented toward those, who are in creative search, who have sufficient erudition and are well-educated, who appeal to the new, who think about current education problems, are directed toward intensive enrichment of the teacher's general culture and his/her intensive "immersion" into culture as the complex of developed thinking habits.

Special attention is paid to direct orientation of the Philosophy of Education on action, technology choice, strategy and education contents as the preconditions of modern education integrativeness formation. Demonstrating the polycentrical, multi-meassured character of the Philosophy of Education, the polyphony and polycentrical of educational process is grounded, the necessity of teacher's effectiveness rising by means of teacher transformation and changing of obedient executor or "being-in-low-status educator" position into the type of teacher with an active life-value orientation on life-creative search, fit for criticism and an adequate evaluation of situations, and for pedagogical activity culture rising.

6. Learning Course "Philosophy of Education"

The instruction of Ukrainian teachers at the In-service training courses (by 144 hours duration) is carried out in a module system and consists of such modules:

I. Philosophy of Education (17 % of all courses extent).

II. Pedagogic technologies and teacher creative activity (19%).

III. Didactics, methods and professional training (50%).

IV. Individual-creative work and pedagogic practice (11%).

V. Classroom testing and evaluation (3%).

A special course "The Philosophy of Education in the context of national state-creation" consists of *seven lectures, a test and a seminar* (18 hours total). The general course structure is:

Lecture 1. Philosophy of Education: Personality, Society, State.

Correlation and interaction of a person, a citizen with different public establishments and groups in the context of democracy and tolerance development is considered in this lecture.

Lecture 2. Modern Directions of the Philosophy of Education.

Philosophy of Education is considered to be a branch of knowledge, that works out and puts the all-philosophical and methodological principles into Pedagogics theory and practice. Such philosophical theories as materialism, sensationalism, empiricism, idealism, rationalism are characterized. The basic directions of modern Philosophy of Education such as: naturalistic, system-harmonious, individually-pluralistic are determined.

Lecture 3. Axiological Aspects of Education

A value of education for a person and society is grounded. A structure of anthropological, moral, aesthetic valuables and their representation in sociocultural environment is analysed.

Lecture 4. Critical Thinking and the Learning & Upbringing Process

The phenomenon of critical thinking as a social, philosophical, pedagogic basis of adequate worldperception and world-thinking, sensecreation of life. An imprescriptible presence of critical thinking in studying disciplines are found, the critical thinking necessity under circumstances of informational civilization is determined, the available foreign and native technologies of critical thinking teaching are elucidated.

Lecture 5. Technological Competence as the Problem of the Philosophy of Education

Such categories as "technology ", "technological competence" are analyzed. The basic technologies types such as: production technologies, information (denotation), authority technologies(public relation), and life-creation technology (self-creation) are determined.

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Lecture 6. Education Quality Problem at School.

The methodological basis of achieving learning effectiveness, productive learning of educational material, technologies of different knowledges evaluation systems application, determination of education quality, methodology of education quality planning are considered.

Lecture 7. Education Problems in the Context of State-Creation.

Education development in Ukraine and the strategy of modern national education, democratizm of the principles of Ukrainian laws about education are considered in this lecture.

Seminar. "Philosophy of Education as the Precondition of Professional Competence and Teacher Active Life-Creation ".

Such questions are considered at the seminar:

1. Philosophy of Education: Personality, Society, State. 2. Philosophy of Education: Classification of Modern Directions. 3. Pluralism of Cultural-Educational Systems and Problem of Ideal of Well-educated Person. 4. Critical Thinking and Learning&Upbringing Process. 5. Ukrainian Mentality and Values Common to All Mankind. 6. Ethnology in the System of School Education. 7. The Teacher's Technological Competence as the Problem of Modern Education. 8. The Philosophical Aspects of General Education Conception. 9. Ethic Problems of the Modern Teacher and Perspectives of Solutions in the Context of Bioethics.

7. Results and Perspectives

The course "Philosophy of Education" has been already put into a system of In-service teachers training 5 years by lecturers of the Institute *chair of the Humanities*. Accordingly the Philosophy of Education for Ukrainian teachers teaching and scientific investigations in this area the International science&practice conference "Pedagogic Practice and Philosophy of Education" was held in (1997) , A number of classic works in the Philosophy of Education and articles about its modern tendencies was published in the rubric "Philosophy of Education" of scientific&methodological journal *"Postmethods"*.

There are short-term and long-term results of the course application. Speaking about short-term results, it's necessary to admit among them first of all:

A) number of indifferent teachers or teachers who feel animosity towards theoretical knowledges;

B) Learning the course of the Philosophy of Education contributes to positive understanding of the Philosophy of Education as applied knowledge, as reflective field of theoretical pedagogics, metatheory in the structure of pedagogic knowledge, its critical-methodological level and initiates the teachers' innovative search.

Such results follow from comparison of subjects of interest in education philosophy at the beginning of course learning and in time of determination of course works themes.

At the beginning of learning of the course " Philosophy of Education", teachers are asked to formulate the most difficult questions concerning pedagogical practice, which, in their opinion, can not be answered by the Philosophy of Education (questions subjects are picked up from teachers answers and are put in the first column of table 2). Some time later teachers are asked to choose themes for writing final works in the Philosophy of Education by 40 thousands signs extension (data about theme choices are in the second column of this table). As per table data, we can see that orientation of the teachers interests in problems of the Philosophy of Education towards deepening of interest in general *Philosophy of Education questions and philosophical aspects of school subjects teaching.*

Table 2. Change of teachers personal interest orientation concerning the Philosophy of Education problems

Problem	*Subjects of problem questions*	*Subjects of final works*
General education philosophy questions	0%	39%
Philosophical aspects of School subjects teaching	10%	15%
Problems of patents & school interaction	15%	10%
Philosophical understanding of upbringing practice	0%	21%
Problems of pupils knowledges evaluation	35%	0%
Forming of interests for studying	30%	0%
Importance of the Philosophy of Education for teacher	0%	10%
Historical&philosophical problems	0%	5%

The Long-term results of the Philosophy of Education course application expresses in growing of general cultural and humanitarian basic point of professional training of teacher, humanitarian teacher potential, that is not determined by the sum of scholarship and special competence, but by degree of approximation to the universal personality; not in learning culturological schemes, but foremost in developing of the universal abilities with the purpose of their following specialization. Universal abilities are those one, which give a possibility to think and to act, to make an own choice and to apply different "mode of thought ", such as: deduction and induction, reflection, empathy, imagination, borrowing and designing of images, ability for synthesizing and making discoveries.

The course "The Philosophy of Education" as one of the courses of In-service education modules in extension of 18 hours during latest 5 years was mastered by 70% teachers of Poltava region. In particular it reflected on the tendency to rising effectiveness of pupil participation at All-Ukrainian Olympiads, and growth of innovative potential of pedagogic activity.

Philosophy of Education in In-service education should provide teachers with practice in the whole of pluralism "thinking habits". As far as cultural achievements, its "products" first of all are the certain symbols models that are the structures of

sound tones, colors, words, ideas, techniques, where symphonies, pictures, novels, theories, technologies are created, then a teacher profession demands of skills to work with symbols, images and abstractions, and the ability to transfer ideas and techniques from one sphere into another. It is important today for teachers of Ukrainian schools to synthesize thinking styles of many cultures. It is indispensable "to revitalize "the mode of thinking as ancient Greeks and Byzantine, so of Kiev's of the Middle Ages, to exercise modern thinking methodologies, first of all in vision and perception, evaluation and creation of different interpretations of the same phenomena, events, "images" of humanitarian knowledge, literature, art; in acquaintance with other cultures, their symbols and myths; in realization of conceptual scientific operations.

Philosophy of Education organizes all teacher's knowledge and skills. In order to realize these tasks, to increase creative potential, to inspire teachers in active search(investigation), the Institute chair of the Humanities plans to organize a learning process using the case-methodology and to provide every learner with the methodological manual "Introduction to the Modern Philosophy of Education", short reading-book and dictionary-reference book in the Philosophy of Education; to provide teacher with systematic acknowledging with the recent achievements in the Philosophy of Education in the same-named rubric in the "Postmethods" and in the annual " "Pedagogic practice and the Philosophy of Education".

Orientation of all our work – Every teacher must have an oportunity to become a *Master of the Philosophy of Education*. Finally works in the Philosophy of Education, which are prepared by the teachers of higher qualification must grow gradually into their Master theses. Experience of Ukrainian schools convincingly demonstrates the high correlation between pupils' success and the scientific qualification of their teachers. That's why the inclusion of the Philosophy of Education into the future teachers' training process in universities, also into the system of In-Service teachers training is necessary, because it is capable not only of increasing teacher professional knowledge, but in forming his/her civilized, informational, technological competence and culture. The task of the new learning course "Philosophy of Education" development is to become the training of *Masters of the Philosophy of Education in the* system of In-Service Teachers Training, that is teachers with one-step higher level of education than that which the majority of teachers have at the present day.

But there are a number of problems concerning inculcation of this course, which have not yet been settled. Now we are working out the criteria of knowledge diagnostics, methodology of teachers testing in the Philosophy of Education, inculcation of case-methodology of the Philosophy of Education teaching in the In-Service education. We are ready for consideration of theoretical suggestions in these problems and possible practical solutions on the part of the international teachers society.

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KNOWLEDGE MANAGEMENT: ENRICHING OF INTELLECTUAL CAPITAL AND TRANSITION TO KNOWLEDGE SOCIETY

Abstract

This paper studies Knowledge Management (KM) issue in a transformation context the Ukrainian society to knowledge society. The shift from industrial society to knowledge society changes the nature of the relationship between society, knowledge and technology. To be successful in a contemporary world it is necessary to be capable to produce Metaproduct and Meta-Technologies. On the way to knowledge society Ukraine has to overcome specific obstacles. Foremost to answer Meta-Challenge: how to transfer knowledge, to bring intellectual capital to effect. Knowledge management is a method of enrichment of an intellectual capital and transition to knowledge society. An integration need of Management concepts of different levels arises. For this purpose the method of creation of metatheory is being offered. Meta-Management is considered to be an attempt of Integrated Approach to KM. Meta-Management is an important competence for organizations development in knowledge society antipode. My study shows that an idea of the Meta-Management has not been used authentically so far. It is possible to start a creation of such metatheory, for example, on the basis of the ideas of agent-based modelling as in the project 'Research Papers in Economics'.

Introduction

The aim of this article is: 1) to define what Knowledge Management (KM) is; 2) to describe the situation with KM implementation in Ukraine and 3) to outline the perspectives for managers and business educational establishments with respect to the application of this management model.

Prof. Bogdan Wawrzyniak offered the Integrated Approach to Knowledge Management during the Ukrainian-Polish Conference "Business Development and Management Education in the Context of Globalization" (Kiev, Ukraine, September 17-18, 1999)[1] His paper facilitates estimating the gap KM is to overcome in transition countries and to develop the concept for Integrated Approach to KM. Understanding the doubts as to KM effectiveness, I am convinced that today we do not have a more effective management tool. Developing the idea of KM implementation as a tool for creating Knowledge Society, I concentrate on KM

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problems in Ukraine, both external and internal. These particular problems account for the enigmatic features of KM paradigm.

Enigmatic Paradigm

Knowledge Management, intellectual capital, and knowledge society are widely spread terms which brought to life thousands of books, articles, and conferences.

The West has been talking and writing about KM for more then ten years already. Recently these methods have achieved the status of a kind of a cult. Many businesses were scared by enormous information flows that they had to deal with. At the same time they were scared with the impossibility of promptly finding the information when required. Some businesses have already implemented or are implementing organizational and administrative systems, which put the process of business data collection and use into a certain order.

IBM and Lotus companies with respect to their KM concept and their profile in electronics have already developed paper management software DOMINO.DOC, paper workflow management DOMINO WORKFLOW, a system for group work in real time LOTUS SAMETIME and an office organization electronic system LOTUS QUICKPLACE, which enable KM with use of Internet capabilities. SAS Institute and dozens of other companies have got the developments of the same kind.

There are some companies, for which KM is such an important business element, that are extremely careful in hiding away and protecting their know-how on work with information, considering it strategically important for their business.

How to Manage Knowledge?

A leading expert in KM, Karl Wiig, described three "pillars" for knowledge management: description and categories of knowledge; appraisal system and measurement of knowledge value; and synthetic link of knowledge with particular sphere of activity[2]. Robert van der Speck and Robert de Hoog enriched the above mentioned to four, focusing on such activities as conceptualization, reflection, specification and revision.

Knowledge management means the following:

- identifying what knowledge assets are in possession of a company
- analyzing how knowledge can bring added value
- specifying what actions are necessary to achieve better profit & added value
- reviewing the use of the available knowledge to ensure added value

In many organizations KM is being implemented via Knowledge-Based Systems (KBS). KBS allows collection, encoding, storage, distribution and access to knowledge in a specific domain. KBS development methods help a subscriber (user) to acquire, present, and structure knowledge. They facilitate the establishment of knowledge repositories for permanent use.

KM is developing due to a prosaic fear of businesses owners, that their employee knowledge can remain unused. One of the leading specialists in KM Paul Strassmann writes about the employees: "They are the individuals, who leave their workplaces every night (and might never come back), store in their heads the know-

how acquired, while enjoying their salary. Their brains are repositories of knowledge accumulated during hundreds and hundreds hours of listening and talking before the goods or services are not delivered to profitable customers. The employees' minds, and the files they manage, carry a part of the company's knowledge capital. This makes every employee a custodian of the most important assets a firm owns, disregarding that these assets are never reflected in any financial report"[3].

KM is attractive for the countries under transition by its low cost compared to the other ways of development (purchase of new technologies, equipment, resources and other methods available). Books or software are cheaper compared with to respective technologies and physical objects, or as apologists of "new economy" insist, they have "zero cost" (K.Kelly). But at the same time they forget, that to purchase a book and to absorb the knowledge coded in it are two different things. That's why KM implementation problems step beyond the attempt of understanding it (what is it all about?) to the problems of the teaching process, education philosophies, pedagogic, on the one hand, and on the other, they fall under the issues of general scientific research theory and knowledge integration theories[4]. The effective methods for calculating Knowledge Capital, as well as the attempts to create metrics of intellectual capital[5] are interesting, but at the same time they are a kind of advertisement, because they are aimed at interpretation of KM enigmatic paradigm into the financial terminology which could be understood by the businessmen.

The Sad Results of KM Implementation

The research results show that the financial assets, invested by companies in information flow management technology (Knowledge Management, KM), could be spent in vain, because a company can not cope with unexpected impediments such as the "human factor". More than two thirds of the companies under the survey are really being "choked" by the "burden" of the information, accumulated in their information systems. These companies encounter the problem of information overloads, when their employees have no time to exchange the accumulated knowledge, that's why they often "invent a wheel". At the same time, the research showed, that only less than one third of respondents tried somehow to promote an exchange of cumulative experience among the colleagues, providing special incentive systems for this purpose.

The situation with KM implementation in Ukraine is difficult to define accurately, because the adequate statistics are not available. But according to the'results of the international conference on information technologies implementation problems in economy and business (May 2000), which took place in Taxes Inspection Academy of Ukraine, one could have an impression about dissemination of KM. During the conference attention was paid to generalization and systematization of experience of Ukrainian and foreign financial and lending organizations, state structures, research institutions, integration companies which

provide creation and use of information technologies and knowledge systems in economy, business, tax and financial spheres, education, as well as to the issues of information security. During the previous virtual conference on this subject 5000 seances of information exchanges, dialogues took place. 200 abstracts and 90 scientific articles were offered for the conference. From this data, one can say, that KM has begun to develop in Ukraine. But the question is, whether such scale is sufficient for 3 million enterprises operating in the country?

Certainly not. Moreover, though deconstruction of KM has begun in the West today[6], for the majority of Ukrainian businessmen and management specialists KM remains to be an enigmatic paradigm. At the same time:

- Adapted KM technologies, which are to be implemented under the con ditions of limited access of Ukrainian society to information and communications, are not available;
- The government declares IT implementation, but even our top-managers in scientific research think that "scientific research is being destroyed according to a certain plan";

Though on the Ukrainian market for the seminars and training on business-education we see expansion of foreign ideas, principles, and values (which sometimes are in conflict with our national mentality), however training and workshops on KM or BCS are the least represented.

Special KM or BCS courses have not been developed and are not being taught in the majority of Ukrainian business-schools. Here we come to practical and theoretical problems:

- How to define the nucleus of know - how, which can be borrowed from foreign KM concepts in order to work - out our own concept or adapt foreign countries' experience for this country;
- To make clear the procedures if its implementation in business
- To have in mind, that the same way as in Ukraine we are implementing "IT education without hardware", by analogy for us it is necessary to have also " KM implementation without hardware".

To tackle all these problems we will make an attempt to conceptualize KM issues in a wider context of transformation of Ukrainian society to knowledge society, but first of all we have to define the term "KM".

Knowledge Management: Semantic Drift or Conceptual Shift?

Though considerable academic and professional attention has been focused on this area in the past decade, the concept of KM is not yet stable: the term appears to be used differently across different domains with each claiming that its partial understanding represents the final articulation of the concept. . Davenport, B. Cronin (UK) explore knowledge management in the context of three domains: library and information science (US), process engineering, and organizational theory[7]. In the first of the above mentioned - knowledge management in the US context or 'KM1' - knowledge management is predominantly seen as 'information management'

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(management of internal and external publications in other words). Hence the 'semantic drift' appears in the title. In the second domain - knowledge management in the context of business processes, or 'KM2' - knowledge management is seen as management of 'know-how'. This perspective emphasizes processes and activities, with a strong focus on representations ('ontology') of activities and possibilities. In the third domain of organizational theory or 'KM3' 'knowledge management' denotes a major conceptual shift from knowledge as a resource to knowledge as a capability, or readiness to respond, which allows organizations to jointly develop effectively in existing environment. From this perspective, what is managed is not a resource but the context in which such readiness is evident. The 'context' may be seen as a 'space' where the tacit and explicit knowledge of all members of the organization interact.

The first two KM facets presented above are to some extent stereotypical. Though there is innovative work in each domain which attempts to take more holistic approach than our descriptions imply (one that may be aligned with KM3), KM1 and KM2 do embrace the stances that can be traced in the periodicals. A "KM-triad" framework based on these positions is a handy tool, but for exploring the tensions that arise in any organization committed to "knowledge management", in which different domains have different understandings.

Each of the case studies is based on a common infrastructure - the Internet, and its ability to make the knowledge, which before was tacit and implicit, visible and available, as well as absolute knowledge. Such a situation offers opportunities to avoid the myopia produced by traditional adherence to one or another KM approach. As in the world of e-commerce, actors in each of the scenarios outlined above can now work with stakeholders in new ways, a development of particular importance where the 'customer', 'patient', 'citizen', or 'user' is concerned. In addition, the web offers new opportunities for visualizing processes and profiles, recording and coding the tacit side of KM3, and accelerating the conversion of a human being into capital structural component.

Knowledge Capitalism and Knowledge Society Antipode

It is widely accepted that we are now in a period of a shift from an industrial society to a post-industrial (information society) and transition from an information society to a knowledge society.

In the book "Knowledge Capitalism: Business, Work and Learning in New Economy" (1999) it is shown, how an intellectual economy emerges, how it forces the firms to restructure themselves, to change training forms and work procedures. Making use of economic and management theories and examples of the leading firms, the author produces society development formula: "From the Knowledge Revolution through the Rise of Knowledge Capital, by means of Knowledge Escalator and Learning Imperative, Knowledge Capitalism can be implemented"[8].

Not only Western society, but the entire planet is moving from Capitalism and Nation-States to a Knowledge Society and the Society of Organizations. Some

societies will skip capitalism stage, putting further emphasis on the development of their infrastructures.

The shift from industrial society to knowledge society changes the nature of the relationship between society, knowledge and technology. This shift affects in a fundamental way the role of ICTs for the distribution of knowledge, the development of network economies, networks of social innovation and networks of co-development. The challenge facing the information society, thus, is how to re-integrate diversity and subsidiary function into the present techno-centric project of the information society. One way forward is to develop knowledge networking for co-development, building it upon the notion of human being and machine symbiosis.

But the most important is understanding, that knowledge society is the society, which openly confesses in its ignorance and informs all its citizens via the respective governmental and public organs, that, for instance, it is not aware:

- How to recover from crisis;
- How to fight against corruption;
- What arrangements are necessary to bring down resources expenditures.

People who occupy certain positions in knowledge society are the people who know well, what should be done in their offices for the sake of the society.

Knowledge Society is one of the ideal social structures and it positively characterizes some of the existing countries in advance before they prove it, because nobody in the whole World succeeded to create New Atlantis described by Francis Bacon. In his imagined New Atlantis Bacon has foreseen the formation of the academy of science. For understanding of the nature of knowledge society it is necessary to consider the antipodes like famous dichotomy: "open - closed ", "capitalist - communist", "aristocratic - ochlocracy", "democratic - totalitarian", etc. Knowledge society antipode has not been picked out from the literature and not studied yet in the way it had been done with respect to the other antipodes of the "normal types" of society.

Ukraine has to make a break through to the countries, whose level is largely determined by knowledge development in the wide meaning: technology, market and financial knowledge, understanding of trends, the balance between economic growth and resources saving. Along with that, we mean the culture of the society, which is based on knowledge and methods of its delivery.

Ukraine on the Way to Knowledge Society

Embryonic transition of Ukraine to knowledge society can be illustrated by many examples: unsatisfactory work with patents or dissertation thesis (fundamental science), or when the government forgets about important knowledgeable organizations in charge of its resources ("Ftudozbut"); or about the scope of Internet use in Ukraine. 207 Ukrainian providers serve 170-190 thousand users. The figures are approximate, because the statistics are not being applied. Content part of Ukrainian Internet consists of 30-45% of the information about various enterprises, 25% is the information of general type, 5% accounts for mass-media, 1 % is the

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information from state bodies. (The above data is collected by O. Baranov, 24.02.2000). Computer sales in Ukraine (90% of which are bought to handle normal business) grew up from 200 thousand in 1998 up to 250 thousand in 1999. Per capita expenditure on information technologies in Ukraine is less than $8 (according to the estimates of the experts). Per capita expenditures on information technologies in Russia are 4 times higher than in Ukraine. At present in the USA 159 million computers are in use, in the countries of the European Union the figure is 135 million, in Asiatic-Pacific region -116 million, in Russia - about 9 million, in Poland - a million, then in Ukraine only - 900 thousand. It's known that the development level of information technologies is not only an indicator of economic development but it presents, at the same time, the information objectivity about all of processes, that take place in the country.

What Hampers Ukraine on the Way to Knowledge Society

On the way to knowledge society Ukraine has to overcome specific obstacles. During the recent soviet times many everyday contemporary communication and information methods were under strict administrative control on the part of the state. Let us think about "Glavlit" (censorship office which had to officially approve any written matter), rights to access the foreign mass media, photocopying machines, fax machines and international telephone communication lines.

We have got ten accustomed to basing our judgment on hard figures: tons, cubic meters; and insensible soft factors, which are measured by "bits" and "quits" (quality digit, quit stands for binary digit, bit), play a bad trick on us as: we either do not understand their importance and value, or think they have some supernatural properties.

KM is to be implemented according to one important principle: we should be less focused on the knowledge which is superfluous, not important and non - relevant, however Ukrainian space is over-saturated by this type of information in particular. Though here we see a knowledge paradox - we can not foresee, which way even inessential knowledge will reflect in the whole structure of the existing knowledge and what kind of reaction it will have.

Along with the psychological problems, we encounter simpler and more obvious ones. For instance, our knowledge of foreign languages is pretty poor (first of all I mean the English language). Even if we speak a foreign language, usually this knowledge is limited by the so-called "business language".

The newest type of information for us is the information about the different markets. The Ukrainian economy has been developing independently, being a part of the Soviet economy, without looking back at what was happening in the world market. As a result it turned out to be totally unprepared to compete with a powerful world economy on its own territory: before we managed to penetrate the world market, it started invasion. All the businesses, with which we have to compete all are already here. To this end we do not have adequate experience of cooperation with the international information market.

Ukraine is persistent in creating a normal management system. The archaic system of command economy with subdivision into ministries and industries, with lack of horizontal interaction is being eliminated. Strategic thinking is given a preference as compared to the ability of the bureaucratic system to avoid making even the most benign decision, sending it higher up to the top level for decision.

The existing different forms of electronic support of management process, data bases, paper flow procedures (with all respect to information technologies), can only make improper management system even worse.

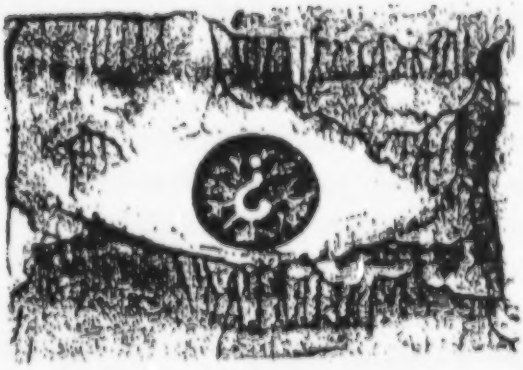
And the problem is not only the budgetary deficiency. It might be the absence of a correct algorithm; a concept of conceptual management is not being used. There's nothing special about it; all these methods are famous and accessible. Any big project, which involves more than one billion dollars, is certainly to be implemented with the use of electronics. But today a major organizational and human resources management reform is much more important. But why is this not being done, or are we sluggish with these processes?

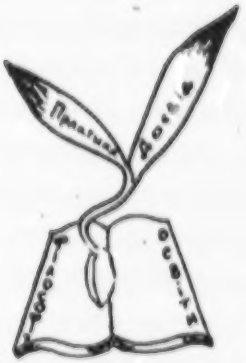
Intellectual Capital

Intellectual capital is defined as a sum of what you know. The term "intellectual capital" is not simply good, but it determines understanding of society development in the new millennium. This issue, which is the most topical in the World, is nowadays also being discussed by top officials of Ukraine. A series of concrete actions was taken: by Presidential decree an inter-departmental committee for intellectual property protection was set up and special attention was paid to this issue in a special Letter of the President to the Parliament. In the program of actions, stipulated by the Government for the coming 5 years, the priority was given to the development of information technologies and the Internet.

There are examples of successful decisions in business. Company "Quasar-Micro" has been working for 10 years in computer business where the most advanced market mechanisms exist. Its president, E. Utkin, Chairman of the Board of Ukrainian Software Producers Association, indicates, that his company has invested big resources in order to have on-line (real time) mode information about the market, the products, and all the processes going on in the company. Any mistake in forecasts can be fatal for a company operating today. According to Utkin's estimates, during the Soviet times Ukraine had 40% of the whole potential of the Soviet Union in cybernetics. He indicates, that "our intellectual potential is the intellectual capital, which has not been used". Certainly, any unused intellectual potential has no value. But nevertheless, for any KM system it is very important to have methods to estimate its value with the perspective of its presumable use, which requires grounded decision-making both by the government and businesses. This information should provide analytical support for correct decisions to be taken, or in order to gain support of the general public the government or a company should have arguments to ground any of their decisions, to show its advantage compared to other alternatives and to forecast possible consequences.

The drawings made by the teachers training courses participants as a result of learning the course 'Philosophy of Education' in Poltava INSET





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The building of Poltava Ostrogradsky Regional In-Service Teachers Training Institute

The portrait of Ostrogradsky, a famous educator and mathematician

The minister of Education and Science of Ukraine V.Kremen and the prorector of the INSET-Poltava V.Zolotukhina near the Institute exhibition at the Forum 'Education –2000' in Kyiv

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During the meeting, Wendy Wakeman , the dean of professional study faculty of the Fresno Pacific University, Colorado, USA and rector INSET-Poltava P.Matvienko

The meeting of the Humanities chair of Poltava INSET

During the meeting of the Management of Education chair of Poltava INSET

The seminar of Poltava region teachers in Applied Economy sponsored by 'Junior Achievement'

The seminar of Poltava region teachers in Economy methodology delivered by National Council on Economic Education and Center for Economic and Civic Education, University of Nebraska at Omaha

The meeting with J. Dick and M.L.Reiser, the representatives of University of Nebraska at Omaha, USA in Poltava school №3

If the methods of businesses' intellectual capital evaluation are more or less developed, as far as I know, there exist no methods to evaluate the intellectual capital capable of "capitalization". We can use the Utkin's method: after the first year the software industry in Ukraine was restored, the value of software produced in the country was estimated at $100 million with further exponential increases within the following decade. Ukraine has the potential to become one of the world's software production centers along with India, Pakistan, Ireland and Israel.

Why Ukrainian Intellectual Potential Is Not Being Capitalized

Development of the society is guided by the system of different elites, where the intellectual elite is blocked by nomenclature and the oligarchical a elite, which comprises businessmen neglecting moral principles in activities of their companies. It seems to be the most likely case that the managers' elite is being "bought on the spot" in the process of privatization and is "pocketed" by the oligarchs. As a result the society takes the decisions, which hold Ukraine bask from knowledge society. Ukrainian intellectual software industry potential works in "off-system economy" or adds to the capital of the companies exporting high technologies. The number of Ukrainian companies involved in software development does not exceed 20. Their total sales do not exceed several million hryvna. Ukraine`s 40% share in soviet cybernetics is shrinking. The cause of this is not the lack of state financing, but ignoring and suppression of business in high technologies sector. This situation is practically the reason for its complete decline and fall.

Ukrainian intellectual potential is not being capitalized because of the "brain drain" and information cracking, but because we are not capable of selling anything. Today production is much easier than marketing. One should know the economic situation, modern technologies, market conjuncture, legislation of different countries and, most important`y, to know the consumer. The first marketing demand is information availability. If you do not know the market, it means, this market does not exist for you. If the market is not aware of your existence, it means you do not exist at all. Our aim is to gain competitive ability. And it can only be a real, actual one. Competitive ability does not imply definition "potential competitive ability".

One can spend hours trying to convince everyone about his genius, but, till you do not produce something and do not sell it, all your claims about your rich potential are worth nothing. We are not aware, how to create meta-products and many other things, which we do not notice behind the facades of contemporary meta-technologies.

What We Do Not Know?

If American KM is worrying how not to loose even the most specific knowledge of his employees, then Ukrainian KM must worry whether his employees know what they must know. «What do we not know?" - is the main question, which our businesses should find the answer to. These questions comprise several issues:

- Whether we know the philosophy of contemporary business, management and organizational development?

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- Whether we know how to minimize the costs (both materials and power) of our products?
- Whether we know how to decrease excessive office information?
- How not to do work, which is not required?
- Where and which way shall I find the ideas that the following statement comes true: there is no situation when you have no money but there is the situation when you have no idea where to get the money from.

The main reason for the slow capitalization of Ukrainian intellectual potential lies in the absence of answers to the above and similar questions, or lack of knowledge, which can be transformed immediately into real results.

Meta-Technologies and the Theory of New Growth

KM is based on the famous works of F.A.Hayek and A.Toffler[9], which sing the praises of knowledge. Along with that the authors do not appeal to such an important factor that at the same time knowledge is being generated by interaction of a person with the respective material resources sphere as well as socio-logical and cultural context. Knowledge, which is being generated by abstract knowledge, very often remains "the knowledge for the sake of knowledge".

The most important breakthrough that led to appearance of information society, and one of its essential features was the introduction and rapid dissemination of the so-called "meta-technologies" (PC networks, contemporary communication technologies, different organisational technologies; management technologies and technologies aimed at forming public opinion).

Paul Romer, a professor of Berkley University in California, a leading developer of new growth theory, pointed out an evident cause of economic growth. If traditional science considers only two production factors - capital and labour, then Romer adds up a third - technology[10]. The theory of new growth attempts to formalise the idea, that for any society development of new technologies is functionally dependent on the amount of effort spent on this process. According to Romer new economy is based on ideas to a larger extent than on material objects. A key distinction between the objects and ideas lies in the following: the objects have got permanent cost per unit, whereas ideas have very high cost per the first unit produced and practically zero cost per each subsequent unit.

Following the above idea, computers are capable of redistributing a balance between production and research and development process. If this is true, then the economy will resemble "Microsoft" more and more with a pretty big group of people involved in research and development but not production. This will give rise to permanent changes in the required research and development sphere versus indexes of economic growth. Management must be ready to manage bigger economic changes than before. If we stop research and development of new ideas, then our capacity for growth will be seriously limited. Ideas and the whole process of search for new things - these are the key factors determining growth.

Time of meta-technologies, new economy demand from "a man of printed matter", who represents the bulk of Ukrainian human resources, to be able to transform into "Turing's man" or "man of networks". And for this purpose it is necessary to cultivate "learning society", directing the education on people's mastering of production technologies, self-management, denotation systems and management (authority). In the time of meta-technologies and meta-prod-ucts here comes the time of meta-management.

Meta-Management

If KM is most effective among all management models, then this means, that we have to implement it. But, as we see, available KM technologies still have not solved the problem of information observation, or mastering the necessary knowledge. One can make an assumption that this happens because, KM, just like communism, cannot exist in a separate company or to put it more precisely, will not be fully effective, when this company is not located in knowledge society gravity field. Here KM has a better chance as compared with communism on the company level, so we have to implement it. Today practically there is no difference in gravity field in which knowledge society will be working: its own or some other.

KM, being one of the latest theories and management practices, as all previous ones, is not the truth in the final instance. In such a situation, we usually say that another management theory is required. And there are a lot of such theories. In their book Management Redeemed, Ex Donaldson and Frederick Hilmer explore at least 15 widely-used theories that have been developed to tackle all the problems in business environment in the past 30 years (TQM, BPR, JIT – the abbreviations pretty familiar to us). The scholars are turning to what seems to be brand new theories (and often they contradict each other) as fast as Silicon Valley develops new versions of its products, which are being produced faster than the consumer masters Version 1 before Version 1.1 "is knocking on the door"[11].

There have been plenty of new great ideas developed which were supposed to improve business, but when people try to put theory into practice and make the change, they often fail. Four out of five attempts to introduce corporate change in the United States are doomed to failure, according to Douglas K. Smith's 1996 Taking Charge of Change.

An integration need of management concepts of different levels arises. For this purpose the method of creation of meta-theory is being offered. This method is not new. Let us recollect Aristotle's Metaphysics, which was a prelude to new approaches in development of meta-mathematics, meta-logics, and meta-philosophy. A few consulting groups in the USA, UK, and Sweden realised the need in meta-management. Meta-management is considered to be an attempt of Integrated Approach to KM.

Meta-Product

Meta Management AB company, created by Linn Carl Eric in 1986 in Stockholm, Sweden, was the first to use the term meta-management in the name of

the company. The basis for the company was his original concept of the meta-product and then he was the first to revise the role of intangible values in products and brands. Now his theory has been developed into the General Theory of Marketing. Meta-management is based on a profound and unique understanding of the brand and the origin of product value, as well as the practice in creation and retention of customer perceived value[12].

Customer Perceived Value and Customer Retained Value is the two-faced key to profitability in any organization. Meta-management is focused on the issue of how the value is being developed and controlled through organizations.

Twenty years ago brands were predominantly regarded as indications of origin. Over the years businesses came to understand the importance and value of brands, and during recent decades we experienced a real flood of literature on the subject. Today most consumers are aware of the meaning of brands and why they have to pay more to have a relationship with strong brands. Even so, we are still only at the beginning of the age of brands. The literature is offering lots of techniques, concepts and methods. But, even in the second generation, the creation of strong brands remains quite an intuitive business. Today, however, we are witnessing the emergence of concepts, which represent the 'third generation' of branding. As in other developing disciplines, we have arrived at the point where we need a theory. This, in turn, led K.E. Linn to the insight that commercially we make a greater profit from the 'meta-product', "the product outside the product". So, the key to success is the increase of the product intangible value.

Meta-Competences in Management

The Following step was Lebow's (1995) definition of the meta-management as concentration, comprehension, and influence in managerial activity[13]. On such principle Meta-Management Consulting developed a web-site (http://www.meta-management.co.uk/) to help in developing meta-competences in management (September 1999). The vision of this consulting company is that meta-manage-ment fits the organizations of the future. Meta-management is a way of thinking, acting and reflecting, that enables us to be effective in new or rapidly changing situations. 'Meta' is the Greek word for 'above' or 'far away'. Meta-management is, thus, the ability to take a view of an issue from a different perspective, to think at a higher level and see its new features.

"Meta-management is an important competence for organizations` development. It is because manager's work is more demanding nowadays. Standard managerial thinking is adapted to continuity of operations and clearly defined structures of accountability. It is not suited to the pace of change and the increasing complexity of today's business environment. Our managers need something special if they are to deliver higher performance in their structures.

Meta-management thinking takes you to a higher level of effectiveness in problem-solving ability. Meta-management releases new sources of productivity in subordinates by changing the directions of your management. Meta-management

enhances your personal effectiveness, whether in leadership, project management, communication or team mentoring. Meta-management enables you as a leader to achieve step-level shifts in organization functioning by realizing 'second-order' or systemic change" (HYPERLINK http://www.meta-manage-ment.co.uk/ http://www.meta-management. co.uk/).

Meta-management in this version of Meta-Management Consulting means the ability to act and at the same time to see oneself as a part of the system, which is influencing us and responding to our actions.

My study shows that an idea of the meta-management has not been used authentically so far. Meta-Management has not been raised to the level of com

parative Management. First of all we speak about use of KM in Management the ory and practices. It is possible to start creation of such meta-theory, for exam

ple, on the basis of the ideas of agent-based modeling as in RePEc project (Research Papers in Economics)[14].

Meta-Challenge: How to Transfer Our Knowledge?

One can be loaded and overloaded by information. Only education will allow a person to separate corn from darnel, to use the information in a better way and to turn it into knowledge.

Ukrainian society is still locked by myths and lives in a limited and perverted knowledge field. However, here we do not stand for precedent. The hope of Ukrainian society is to create knowledge society, well educated, informed, capable to reasonably solve its problems.

Peter Alheit and Bettina Dausien in their research showed, that a micro-social factor (biographicity) is the decisive factor in reaction of an individual to macro-social challenge[15]. We have to pose a question how this hidden potential could influence the reform for educational thinking as well as the existing educational bodies. We would like to name these observations as "meta-challenge". It appeals to the fact, that we actually know a lot about macro-social changes. We are informed about micro-social, i.e. biographic, comprehension strategies. But we fail to transform our knowledge into institutional organization.

From the point of view of education management it is necessary to find out what kind of knowledge will be in demand in the future, which way to organize this knowledge delivery, what risks are inherent to institutional reforms? The present article has the aim to try and answer some of these questions.

KM in all its final recommendations looks out for various educational models: "organizational learning", "learning society" and some others. All KM in K.Sveiby shrinks down to the conclusion that people need more liberalization. .Strassmann calls for better calculation of intellectual capital. Proceeding from the above, what kind of conclusions can be reached by business-schools in the countries under transition? In my view, they will be able to give the right answer to this challenge only implementing a KM triad with a perspective of forming managers, capable of

meta-management, the managers who know how to make meta-product and meta-technologies, not forgetting about routine order and procedures.

Conclusions

To be successful in the contemporary world it is necessary to be capable of producing meta-product and meta-technologies. Aggregate Knowledge has a chance to transform into intellectual capital only in knowledge society. Release of internal society energy is possible under the condition of meta-management implementation on all levels of the society, which is based on understanding, that in any society with transitional economy one single management model is impossible. Transition from chaos of economic models to the economy of knowledge is to take place in different parallel coordinates. These can be: the induction of elementary order by Frederick Taylor, and reading RDrucker's works by "a man of printed matter", and use of "conceptual management" and management-by-chaos by corporate organizations and governmental institutions. But self-management is the basis of all management types; self-management which is fit for development and implementation of organizational development philosophy.

Since KM presents a radical conceptual shift, it is important for training at business-schools. Though for practical management "Office-2000" is required, more attention should be paid to psychological and general theoretic readiness for use of management techniques, moral behavior of the company in the society.

KM is a notion which offers a variety of approaches to the analysis and activities context. "Quality" of the expanded methodological tools (for example, ontology design, activity analysis) and their interaction develop the required genre analysis.

KM requires concentration of interdisciplinary teams in order to develop meta-management. The focus of meta-management means not only resources, but creation and management of the context.

Under the evolution conditions we advanced from Information Management (KM1) to Informatization (KM2) and Informational Ethology (KM3). The time for KM4 – Meta-Management has come.

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APPENDIX

APPENDIX A

INTEGRATIVE EDUCATION AND POLYMORPHISM OF KNOWLEDGE

Klepko, S.F. (Serhii Fedorovych)
Intehratyvna osvita i
polimorfizm znannia

Klepko S.F. Integrative Education and Polymorphism of Knowledge.- Kyiv: Redaktsiino-vydavnychyi viddil POIPOPP,1998.- 357 p.

The book is devoted to fundamental philosophical problem of a polymorphism and integration of knowledge to perfecting education. On the basis of representations of a modern nonlinear ontology, critical philosophy, ecological realism, philosophy of a communicative action the conception of integrative education is developed alternative to holistic and postmodernist to philosophies of education. The structure of education is established as a join of relationships of the subject of education to the world, knowledge and society, the realization of which gives a person a possibility of mastering the life-creativity technologies, modern scientific and technological culture. The constructive personality-centered polycentric models of integration of knowledge and tetra-technological principle of designing of a content of education are offered and justified.

Key words: integrative education, integration, science, holism, chaos, order, polymorphism of knowledge, technology.

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СИСТЕМА ПЕДАГОГІЧНОЇ ОСВІТИ ТА ПЕДАГОГІЧНІ ІННОВАЦІЇ. Аналітичне дослідження: [Проект ПР ООН, МФ "Відродження"] / В.Олійник (керівник проекту), Я.Болюбаш, Л.Даниленко, В.Довбищенко, І.Єрмаков, С.Клепко; за ред. П. Згаги. – Київ: 2001. – 5 УМ. ДР.АРК.

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APPENDIX C

POLTAVA OSTROGRADSKY REGIONAL IN-SERVICE TEACHERS TRAINING INSTITUTE

64 Oktjabrska ul.
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E-mail klepko@ipe.poltava.ua
http://www.ipe.poltava.ua

INSET Poltava – Poltava Ostrogradskyi Teacher In-Service Training Institute provides organizational&methodical work of teachers of Poltava region. Every year the Institute carries out teacher training of 4500 persons in 46 specialties. At the Institute there are 3 chairs, 5 departments, 2 laboratories, editorial&publishing department, regional pedagogic center, network of experimental pedagogic centers at schools. At the Institute 2 professors, 10 sciences candidates, 49 methodologists of higher qualification category work.

The Institute develops professional pedagogic knowledge, carries out methodical work with teachers using new pedagogical and information technologies. The Institute organizes regional pedagogical fairs, international scientific&practical conferences, where scientific works of Poltava region teachers are presented. During 1991-2001 the Institute published 130 books, collections, brochures, curricula and textbooks, in particular in Civic Education and Philosophy of Education.

The main aims of the Institute:

Introducing progressive technologies in regional education process;

Providing 35 categories of regional educators with advanced training.

The main tasks of the Institute:

Carrying out methodological work with teachers in the field of new pedagogical researches in accordance with regional education demands;

Working out pedagogical priorities for regional education establishments;

Providing regional educators with new methodological and training aids;

Creation of a net of experimental education establishments for approbation of pedagogical innovations.

Carrying out scientific & methodological investigation of problems in education.

There are some departments and chairs at the Institute:

Pedagogical Technologies,

National Upbringing;

The Humanities;

Mathematics & Natural Sciences;

Editorial&Publishing Department;

Department of Pedagogical Technologies;

Laboratory of Visual Aids;
Chair of the Humanities;
Chair of Education Management ;
Chair of Pedagogical Technologies;
Library;
Administrative Office;
Kremenchuk Regional Pedagogical Centre.

In addition, Makarenko's Museum and Science & Methods Vernadsky's laboratory-museum are subordinate to Institute of methodological researches.

Teachers' training process is carried out by skilled experts: 2 Doctors of Sciences, 10 Candidates of Science, 13 Senior Lecturers, Professors and Corresponding Members of Ukrainian APS. Many scientific seminars and conferences were organized by them. The Institutions' scientific pedagogical staff also takes part in approbation of new school manuals.

The lecturers of the Institute are experienced and highly qualified. They use innovations, computer technologies, and provide experimental investigations at the training courses.

The Institute develops professional pedagogic knowledge and carries out methodological work with teachers using new pedagogical and information technologies. The priority areas of its activity are research and scientific&methodological work. The Institute organizes regional pedagogical fairs, international scientific&practical conferences, where scientific works of teachers of Poltava region are presented.

The forms of postgraduate education are quite various. Teachers of Poltava region attend 2 or 4 week courses every five years. The Institute provides the improvement of teachers' qualification, taking into account the needs and interests of teachers, using up-to-date programs and curricula.

The main direction of postgraduate teachers' training includes topics concerning methodological, pedagogical and culturological problems.

The curriculum includes such modules:

Philosophy of Education;
Pedagogics&Psychology;
Management of Education;
Methodology& Improvement of Practical Skills.

Questionaires are used to study the teachers' opinions and needs.

The Methodology of teaching comprises such items:

The theory of teaching;
Practical classes for updating teachers' skills;
Management skills to plan teaching process;
Basic teaching activities and techniques (including computer technologies);
Exchange of experience and know how;
Observation of lessons with further analysis and discussions.

Teachers have tests in their specialities, have credits in Philosophy, Pedagogics and Psychology, and Methodology.

After finishing courses teachers receive certificates.

Besides courses teachers take part in different kinds of seminars, conferences, and are actively involved in scientific and research work to satisfy their various educational needs and to ensure professional development and improvement.

During 1991-2000 the Institute published 120 books, collections, brochures, curricula and textbooks, in particular, in Civic Education and Philosophy of Education.

The Institute is UCEN/IATP partner and collaborates with the Academy of Pedagogical Sciences and analogical institutions in our country and abroad. It is the strategic partner of the International Institute of Management (Kyiv) and cooperates with the British Council in Ukraine. The Institute works with the International Renaissance Foundation on the implementation of the intellectual game "Debates' and publishes the scientific&methodological journal 'Postmethods'. Recently the Institute became a Ukrcivnet network participant, supported by the Institute of Civic Education.

Institute activities were elucidated in publications of local and central press, in tele and broadcasting.

The Institute has had access to E-mail from 1996 and to the Internet from 1998.

OSTROGRADSKY – FAMOUS EDUCATOR AND MATHEMATICIAN (1801-1861)

Mykhaylo Vasyliovych Ostrogradsky was born on the **24th of September, 1801** in the village of Pahsenna (Poltava Region). Ostrogradsky studied at the Poltava Gymnasium and Kharkiv University. He improved his mathematical education from 1882 to 1826 in Paris, where he constructively collaborated with great Mathematicians such as Cauchy, Laplace, Poisson,Fourie etc.

Ostrogradsky was an outstanding mathematician recognized all over the world. He was elected as an Academician at such famous Academies as St. Petersburg Academy (1890), New-York Academy (1834), Turin Academy (1841), and Rome Academy (1835). He was a Corresponding Member of Paris Academy (1856). He worked as a professor at the Scientific Collegium of Henry IV in France.

In 1844 Ostrogradsky pioneered the method (called the method of Ostrogradsky in books of mathematical analysis) of an apportonment of a rational part of the ideterminate integral.

Ostrogradsky was a brilliant teacher, who took an interest in questions of teaching methods and pegagogics. He worked at the Head Teacher's Training Institute for more than 27 years. He trained many teachers of mathematics, methodologists and authors of books and broshures. He was also a chief inspector of the Russian Military Schools; he selected teachers for them, led methodological works with their teachers, and actively participated in writing books and broshures.

He wrote text-books for secondary and higher Educational Institutions. Here are some famous books:

"Collected Articles of Elementary Geometry",

"Program and Summary of the Trigonometry for the Military Schools",

"Lectures on Algebraic Analysis".

Now many methodologists and authors use these books in their works.

Ostrogradsky introduced the idea of functions for Secondary Schools. Unfortunately many foreign methodologists think that the idea of function was introduced by F. Clane, but Clane formulated his idea after Ostrogradsky. Ostrogradsky also introduced mathematical analysis into the programme of Military. Schools. He wrote: "What can be easier than differential calculus?"

Ostrogradsky's general ideas on pedagogics are collaborately described in the book ***"Speculations on Pedagogics"***, published by him in 1860 with French mathematician A.Blume.

The authors outlined principles of the learning process in the following order:
To activate interest in the students,
To check up bothering,
To develop independent thinking,
To struggle with formalism,
To give a strict academic point of view, but in an accessible and applied form,
To organize classes on some of the disciplines in the workshops,
To pay adequate attention to the point of order and the system in the work.

These ideas as well as many others substantially influenced the Educational Development in Ukraine in their course of time. Many of them haven't lost their urgency in our time as well

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APPENDIX E

INSET-POLTAVA TAKES PART IN NASA EDUCATION PROGRAM "MOONLINK"

The educational program "Moonlink" was started with the launching of the satellite "Lunar Prospector" by NASA in 1998, January, the 6th. The objective of the mission is to map the Moon's surface composition, magnetic fields, gravity fields, and gas release events to improve the understanding of the origin, evolution, current state, and available resources of the Moon.

"Moonlink" is the very first program to bring live, interactive lunar exploration to the classroom. The Moonlink program links the students, via the Internet and NASA, with Lunar Prospector. Students are provided with an analysis of Lunares Prospector science data.

"Moonlink" is an educational science program, an "International Education Mission"

Today the participants of this project are students from more than 50 world countries, including Ukraine. More than 1200 educational establishments and 28000 students are involved in this project. Only Ukraine and Georgia represent countries of the former Soviet Union. Among active participants of the "Moonlink" project are 4 secondary schools from Kharkov, Ukraine and a secondary school from Tbilisi, Georgia. There are two Mission participants in Poltava: Secondary School № 3 and Poltava Regional In-Service Teachers Training Institute named after M.V.Ostrogradsky. The space-work for participation of Novosanzharsky educational-upbringing complex is going to the end.

So the Poltava Ostrogradsky Regional In-Service Teachers Training Institute has much practical experience with using the Internet resources in the field of education.

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APPENDIX F

THE DEVELOPMENT OF ECONOMIC SCOOL EDUCATION IN POLTAVA REGION

- The learning of the course 'The Bases of Economic Knowledge' in 102 secondary schools that make up 30 % of all secondary schools in the region;
- The participation in All-Ukrainian Olympiads in Economics;
- The participation in competitions in economic knowledge;
- The work of the regional School of Business for 8-11 grades for students of secondary schools of the region;
- The participation in the project 'Junior Achievement Ukraine' – the approbation of the piloting course 'Applied Economics';
- The participation in All-Ukrainian business tournament in Kyiv.

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APPENDIX D

"POSTMETHODS"

"POSTMETHODS" is the Ukrainian scientific – methodological journal for educators. "PM" has been published in the Ukrainian and Russian languages since 1993 but it is still not known abroad. Now we are in the process of undergoing a "facelift". So we think this would be an appropriate time to invite new readers and authors to our "kolo" (circle). The journal is on the list of the Greater Certification Committee.

"POSTMETHODS" concentrates attention not only on the methods or scientific problems in the development of Pedagogics, but also focuses on the well-educated individual's creative tendency to seek knowledge and generate new ideas.

Main topics of the journal:

•

Philosophy of education;

• Study of pedagogical thought;

•"Know-how" in Pedagogics, and perspectives of their application;

• Methods of teaching application;

• Useful ideas for teachers;

• Everything that can be useful for the purpose of professional development.

We welcome submissions of original papers, articles, and works on these topics.

Publication of submitted material will depend on the quality of the material.

Criteria for materials selection for the journal:

- Importance for the modern school;
- Unexpectedness (fresh view on the theme);
- Integration, interdisciplinary;
- Elegance.

Submissions in Russian, Ukrainian and English are welcome.

The manuscripts should be sent to the following address:

36029, Ukraine, Poltava, October st., 64,

Poltava Regional Institute of Teachers Recertification, "Postmethods".

Phone/fax: (05322) 24956

List of all "PM" issues contents, conditions of co-working and how to subscribe to "PM' can be ordered at ***e-mail:*** redpm@ipe.poltava.ua.

We are also invite your opinion about our work at the same address.

ПостМетодика

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TO THE BEST SOLUTION IN EDUCATION

Serhiy Klepko, Ph. D., prorector of Poltava Regional In-Service Teachers Training Institute. Editor-in-chief of journal "Postmethodica". Field of researches – Philosophy of Education, Knowledge Integration, Social Philosophy. Author of 70 publications and monographs "Integrative Education and Polymorphism of Knowledge", "Essay in the Philosophy of Education" (1998).

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